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# DIGITAL MAPPING

Volume

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# VOLUME

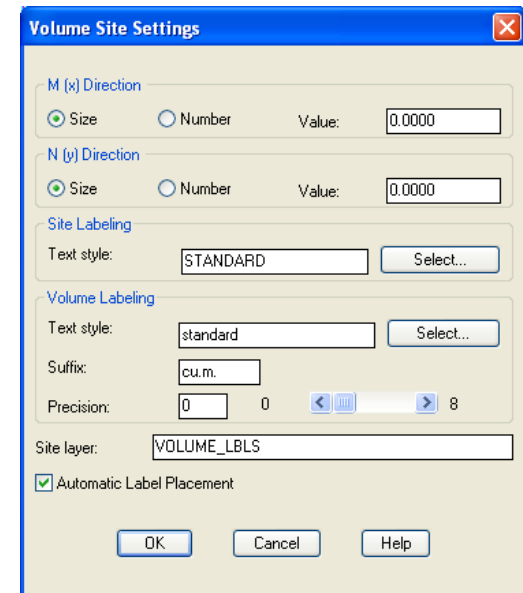
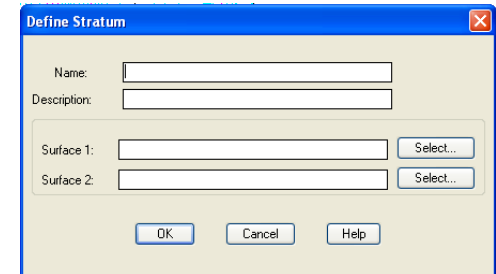
- Menghitung Volume
- Sumber data : data digital Total Station
- Software : Auto Cad MAP dan SURFER

# Volume

- Pra Syarat :
  - Peserta sudah memahami perintah dasar-dasar penggambaran dengan Auto Cad
  - Data Koordinat (X,Y,Z) sudah tersedia

# Volume

- Terrain → Select Current Stratum
- Name : ketik nama stratum
- Description : ketik deskripsi stratum
- Surface1 : klik Select (pilih nama surface) klik OK
- Surface2 : klik Select (pilih nama surface) klik Ok
- Terrain → Site Definition → Site Settings
- Volume labeling : ketik m3
- Klik OK
- Terrain → Site Definition → Define Site
- Rotation Angle : masukkan angka tekan enter
- Ketik .P tekan enter
- Ketik 1 tekan enter
- Grid M : masukkan nilai (mis. 2) tekan enter
- Grid N : tekan enter (default)
- Ketik .P dan gunakan Endpoint OSNAP untuk memilih pojok kanan atas
- Tekan Enter (default) dan No tekan enter
- Ketik Site1 untun nama site



# Volume (Grid)

- Terrain → Grid Volume → Calculate Total Site Volume
- Select site list → pilih Site1 dan klik OK
- Klik OK (default)
- Ketik G1 Site1 untuk New Surface dan klik OK
- Hasil perhitungan volume akan muncul di command line (cut, fill dan net)

# Volume (Composite)

- View → Named View
- Name : select 1, klik set current → klik Ok
- Terrain → Composite Volumes → Calculate Total Site Volume
- Select : Site 1 dan klik OK
- Klik Ok (default)
- New Surface : C1-Site1 dan klik Ok
- Hasil dapat dilihat di command line
- Terrain → Terrain Model Explorer
- Volume: pilih dan klik kanan C1-Site1 dan klik Surface Display → Quick View

# Volume (Section)

- Terrain → Section Volumes → Sample Sections
- Select : Site1 dan klik OK
- Volume Calculation Type : Average end area
- Direction : M(x)
- Klik OK
- Terrain → Section Volumes → Calculate volume total
- Select : Site 1 dan klik OK
- Klik OK dan tekan Enter

# SURFER 8

- Buka software Surfer 8
- Klik Grid → Data...
- Double Klik Data yang sudah tersedia (mis. Demogrid.dat)
- Data Coloumn (pilih X,Y,Z)
- Pilih Gridding Methods (mis. Krigging)
- Pada Output Grid File : Klik Open untuk menyimpan file hasil gridding (mis. Demogrid.grd)
- Klik OK



# SURFER 8

**Grid Data - C:\Program Files\Golden Software\Surfer8\Samp...** ? X

Data Columns (47 data points)

X: Column A: Easting Filter Data...

Y: Column B: Northing View Data

Z: Column C: Elevation Statistics

Grid Report

OK

Cancel

Gridding Method

Kriging Advanced Options... Cross Validate...

Output Grid File

C:\Program Files\Golden Software\Surfer8\Samples\DEMOGRID.grd

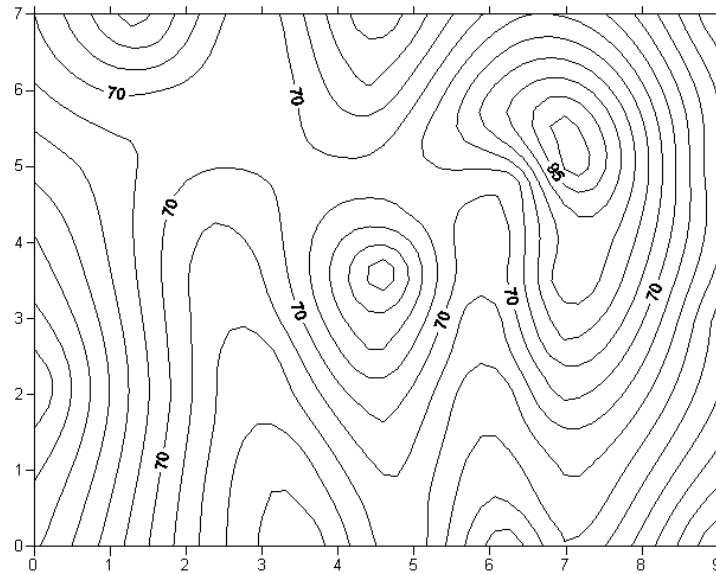
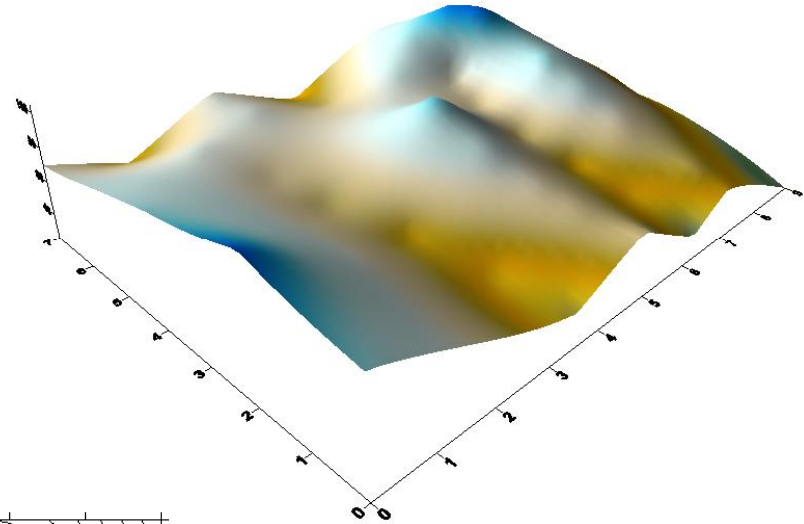
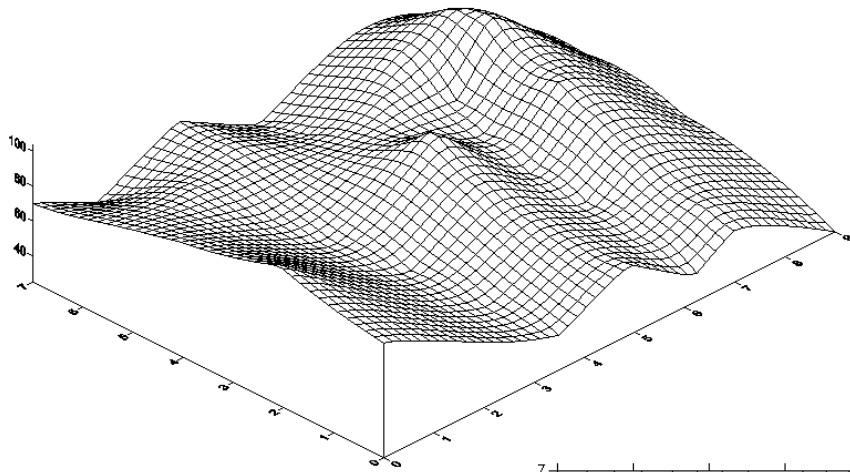
Grid Line Geometry

	Minimum	Maximum	Spacing	# of Lines
X Direction:	0	9	0.09090909091	100
Y Direction:	0	7	0.09090909091	78

# SURFER 8 (KONTUR)

- Klik Map → Contour Map → New Contour Map...
- Pilih file gridding (mis. Demogrid.grd) dan double klik file tersebut
- Klik Map → Wireframe...
- Double klik file yang diinginkan (mis. Demogrid.grd)
- Klik Map → Surface...
- Double klik file yang diinginkan (mis. Demogrid.grd)
- Untuk merubah tampilan gbr yaitu dng cara double klik gbr tersebut

# SURFER 8 (KONTUR)





# SURFER 8 (VOLUME)

- Klik Grid → Volume...
- Double klik file \*.grd yang diinginkan (mis. Demogrid.grd)
- Grid Volume
  - Lower Surface masukkan grid file atau constant Z
- Klik OK
- Hasil perhitungan volume berupa report

# SURFER 8 (VOLUME)



**Grid Volume**

Upper Surface

Grid File   

Constant Z =

Lower Surface

Grid File   

Constant Z =

Z Scale Factor:

**Surfer - Report2**

File Edit

## Volumes

Z Scale Factor: 1

**Total Volumes by:**

Trapezoidal Rule:	4399.100830503
Simpson's Rule:	4399.732078943
Simpson's 3/8 Rule:	4399.661131782

**Cut & Fill Volumes**

Positive Volume [Cut]:	4398.9860093755
Negative Volume [Fill]:	0
Net Volume [Cut-Fill]:	4398.9860093755

## Areas

**Planar Areas**

Positive Planar Area [Cut]:	63
Negative Planar Area [Fill]:	0
Blanked Planar Area:	0
Total Planar Area:	63

**Surface Areas**

Positive Surface Area [Cut]:	968.90327765942
Negative Surface Area [Fill]:	0